SeaVision

FOR SMARTIES

https://seavision.volpe.dot.gov
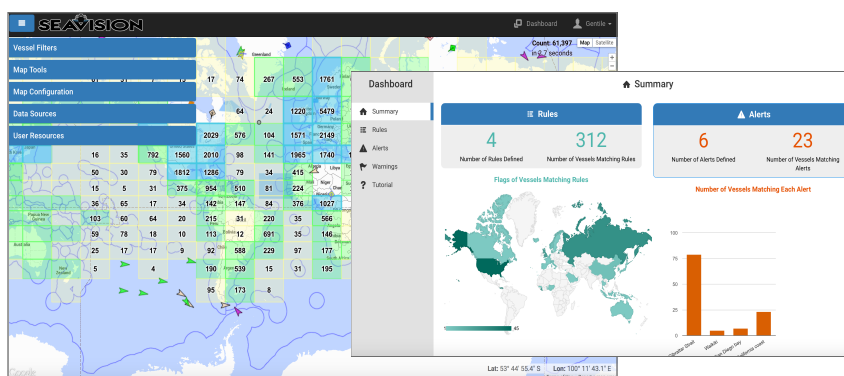
WHAT'S ON THE (MAP) MENU?

Vessel Filters

The **Vessel Filters** tab lets you conduct a variety of vessel-related filters within SeaVision, as well as display many overlays onto the Map. You can run multiple filters simultaneously & you can show vessels that match select criterion, user-defined rules and/or alerts, & saved "custom" vessels. This tab includes:

✦ **Filter by Vessel Type**: an icon key that lets you select the types of vessels that you wish to see on the Map, as it defaults to showing all types.

✦ **Quick Filter**: search for vessels by MMSI, IMO, name (all or part of), destination, cargo, AIS class, Exclusive Economic Zone (EEZ), Area of Operation (AO), or navigation status, by selecting either option & entering the desired search criteria for filtering.

✦ **On Screen Information**: enables you to *Display* certain data on the Map and/or *Filter* Map data by select criterion including: vessel name, Warnings circles, safety & security score levels, Rules indicators, Alerts indicators, & your Custom Vessel Trails.

✦ **Custom Vessel List**: a pop-up window that contains a list of vessels that you have manually saved via each vessel's data card. Within this list you can remove vessels, toggle their history trails on/off & add vessels to your sharing group's list.

✦ **Reception Report**: a pop-up window that contains the AIS reporting history of all saved custom vessels.

Map Tools

The **Map Tools** tab provides a series of in-depth tools to aid in tracking & search activities. This tab includes:

✦ **Distance Tool**: add a Rhumb Line or Great Circle to an area of interest. To add either option, select the type of distance tool & press *Add;* you can select to view either nautical miles (NM), kilometers (KM) or miles, & the *Clear* button removes all distance tools from the Map.

What is SeaVision?

A web-based maritime situational awareness tool that enables users to view & track vessels on a map & understand & analyze vessel movements. SeaVision displays Automatic Identification System (AIS) data from the U.S. Department of Transportation's (US DOT) Volpe Center-developed Maritime Safety & Security Information System (MSSIS) network as well as other data sources, & is designed to ingest & display a wide variety of maritime & geospatially referenced data.

Accessing SeaVision

Request an account by contacting your Community Manager who will contact the SeaVision Help Desk on your behalf. You must have a computer that has internet access & an Internet Explore 10-compatible web browser. Once access has been granted, you will receive an email from the Help Desk (seavision@dot.gov) with a username & temporary password. Access SeaVision using the link, read & sign the disclaimer, & log-in. Once in, you will immediately be asked to change your password based upon SeaVision's password requirements.

Understanding the SeaVision Map

The SeaVision Map provides the ability to view & track information about vessels in both near real-time & historical contexts, with advanced filtering & search capabilities. The Map contains a Navigation Menu ( ) with 5 expandable & collapsible menu tabs. The Map's Navigation Bar contains access to the SeaVision Dashboard ( ) & to your user actions ( ). The buttons in the top-right corner allow you to change the view & zoom-in & out of the Map. The top-right corner also includes the "Count", or the number of vessels that are in the current view, as well as the amount of time it took for the server to retrieve the vessel info to your browser. The bottom-right corner displays filters that you have turned on, as well as the latitude & longitude of your cursor as it moves across the Map.

The colored squares on the Map are vessel clusters & they indicate the number of vessels within an area (the colors depict vessel density). Clicking on a cluster will zoom-in to its area, showing the vessel icons which are colored by type. Clicking on a vessel icon will open the vessel's "data card" which contains AIS data, data derived from the U.S. Coast Guard's (USCG) Port State Control Safety & Security Matrix, & more information & actions.

- *Sharing Group*: select a single assigned group for the purposes of sharing your shapes & custom vessels. Group members can add, edit & remove shared items, including the ones that you added. Before sharing an item you must select your Sharing Group from the list first.
- *User Defined Shapes*: select & highlight a region of interest to track vessel activity. You can choose to *Hide Shapes*, *Show Shapes* or *Edit Shapes*, & you can also *Include Shared Shapes*.
- *Map Layers*: can *Show EEZ Layers* and/or *Show Country Borders* on the Map.
- *Jump to Location*: type the name of any location into the text-box & the Map will jump to the location (e.g., Miami, Florida).
- *Detailed Search*: search that allows you to find, view & map vessels that match your desired search conditions, as well as export and/or save searches. This feature searches the full data set to include real-time & data-based information.
- *Time Machine*: view a snapshot of all AIS traffic for a specific date & time (in UTC), viewing the last known position of vessels within a 2-hr. time frame prior to the specified date & time.

Map Configuration

The **Map Configuration** tab provides advanced Map data configuration settings. This tab includes:

- *Maximum Vessel Age*: view vessels whose last positional data has occurred between now & 1hr. - 30 days in the past.
- *Refresh Delay*: adjust the time between pan movements before reloading the page from 0, 1 or 2 seconds.
- *Refresh Interval*: update the current locations of all vessels on the Map display. The rate can be set to 1, 5 or 10 minutes.
- *History Trail Length*: change the amount of time (1 to 30 days) of viewable historical vessel track data that's displayed on the Map.
- *Set Start-Up View*: set a certain location as the area that you see upon login.

Data Sources

The **Data Sources** tab provides you with the ability to select from data sources that are available to you based upon your permission levels.

User Resources

The **User Resources** tab provides a way to contact the SeaVision Help Desk via an in-browser form, as well as provides a more in-depth, searchable SeaVision tutorial.

Understanding the SeaVision Dashboard

The SeaVision Dashboard enables you to create user-defined rules & vessel alerts, as well as to view & adjust vessel Warnings Scores (derived from the USCG Matrix). It contains the SeaVision Navigation Bar—with access back to the Map (⊙)—& multiple actions within its left menu, known as the "Tools Pane".

A Closer Look at the Tools Pane

The Tools Pane contains access to each of the Dashboard's tools. It includes the "Summary" (a high-level results view of your saved Rules & Alerts), "Rules" (multi-criterion vessel searches that are created by you & run automatically), "Alerts" (real-time notifications based upon real-time data that is run on your saved criteria), "Warnings" (vessel safety & security scores derived from the USCG's Matrix, based upon many factors within each of the two Matrix categories), & the "Tutorial" (a walk-through of how to use the tools).

Rules

Rules search the same data set as the Map's *Detailed Search*, however Rules are run in the background & users can assign scores to them (i.e. has analytics). Rules expire every 30 days & they run automatically every 12 hours. The Rules page allows you to add new rules, run rules, export results from the rules, map the results of your rules, manage rules, as well as view a table of all vessels matching your rules. After adding a rule, the ⚙ Rule Configuration Wizard allows you to add a variety of conditions, assign a score (weight) to each condition, & save the rules. It also lets you edit, disable, enable, renew (before or after the 30 day expiration) & delete rules, as well as view the results of all rules or a specific rule in a paginated table, & view specific rule-matching vessel data.

Alerts

The Alerts tool allows you to instantly know when a vessel has met your selected criterion, which is chosen from a variety of AIS data fields. Alerts help you to track & analyze vessel activities as they're happening, & the tool's page enables you to add new alerts (with specific conditions & a geographic region of interest, if desired), view a table of vessels that match your alerts, export results from the table, map the results of the table, manage alerts, & change the settings of the alerts using the ⚙ Alert Configuration. You can also request to receive emails with matching alerts to an email address, such as your personal address or the email address of a known distribution list. The Alerts results are deleted every 24 hrs.

Warnings

Warnings Scores are refreshed every 24 hours & are weighted from Low, Medium to High. The Warnings tool is best used for vessel targeting & it allows you to search for a vessel's score by IMO (International Maritime Organization's reference number) and/or MMSI (Maritime Mobile Service Identity number). This tool gives you the option to modify Warnings Scores by changing the weights of score factors, among other configurations. The tool's main screen performs two functions: helps you to quickly find the safety & security profile of a known vessel, & offers a high-level overview of the number of all vessels with high & medium safety & security scores from the Matrix.

When you search for a vessel an "Overview" page will appear for that specific vessel, containing a graph that displays the scores for each factor within the two categories, & information showing the vessel's scores for each factor.

You can change the weights of the factors within each category & define new Warnings criteria by pressing ⚙ Configuration on the main page. You may want to change a Warnings score away from the pre-set weights because you are more interested in one factor over another in your area of operation (i.e. pre-determined weights of "vessel age" may not be weighted as heavily as you'd like them to be). Changing the weights is revertible & you can always return to the default settings.